

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A process for manufacturing a carbon steel strip[[,]]
~~especially steel strip for packaging~~ suitable for use as packaging steel, in which:
- a steel having a composition suitable for use as packaging steel, wherein said steel contains alloying elements of Si, Cr, Ni, Mo, and Cu present in an amount less than 1%, and wherein said steel is cast in the form of a thin strip from 0.7 to 10 mm in thickness, directly from liquid metal;
 - an in-line hot rolling operation is carried out on said strip, wherein the strip after hot rolling has a thickness of less than 3 mm, and wherein at the end of which said steel is in the austenitic range;
 - said strip undergoes forced cooling at a rate of 80 to 400°C/s, at the end of which said steel is in the ferritic range;
 - said strip undergoes a cold rolling operation with a reduction ratio of at least 85%;
- and
- said strip undergoes an annealing operation.

2. (currently amended): The process as claimed in claim 1, ~~characterized wherein in~~
~~that said strip is cast~~ comprises casting between two internally cooled horizontal rolls rotating in
opposite directions.

3. (currently amended): The process as claimed in claim 1, ~~characterized in that~~
~~wherein~~ said hot rolling operation is carried out in a single step with a reduction ratio of at least
20%.

4. (currently amended): The process as claimed in claim 3, ~~characterized in that~~
~~wherein~~ said hot rolling operation is carried out in a single step with a reduction ratio of at least
50%.

5. (currently amended): ~~The process as claimed in claim 1, characterized in that~~
~~said~~ A process for manufacturing a carbon steel strip suitable for use as a packaging steel, in
which:

- a steel having a composition suitable for use as packaging steel, wherein said steel
contains alloying elements of Si, Cr, Ni, Mo, and Cu present in an amount less than 1%, and
wherein said steel is cast in the form of a thin strip from 0.7 to 10 mm in thickness, directly from
liquid metal;

- an in-line hot rolling operation is carried out on said strip in two steps,

wherein ~~in that~~ the first ~~step of these steps~~ is an in-line hot rolling step carried out in either an austenitic or ferritic range of the cast strip, with a reduction ratio of 20 to 70%, and then cooled down into the ferritic range, if not already in the ferritic range ~~in that~~, wherein after this said first step, the strip is reheated so as to make said steel pass from the ferritic range into the austenitic range, and ~~in that~~ the second step is an in-line hot rolling step ~~is then~~ carried out with a reduction ratio of 10 to 30%, at the end of which second step said steel is in the austenitic range.

6. (currently amended): The process as claimed in claim 5, ~~characterized in that~~ wherein said first step is carried out entirely in the ferritic range of said steel.

7. (currently amended): The process as claimed in claim 5, ~~characterized in that~~ wherein said first step is carried out partly in the austenitic range and partly in the ferritic range of said steel.

8. (currently amended): The process as claimed in claims 1, ~~characterized in that~~, wherein after ~~the strip has been~~ said cast, the strip it is made to pass through a region in which it is subjected to a nonoxidizing environment.

9. (currently amended): The process as claimed in one of claims 1, ~~characterized in that~~ wherein the strip is subjected to a descaling operation before and/or during the hot rolling.

10. (currently amended): The process as claimed in one of claims 1, ~~characterized in that~~ wherein said forced cooling is carried out at a rate of 100 to 300°C/s.

11. (currently amended): The process as claimed in one of claims 1, ~~characterized in that~~ wherein said forced cooling starts when the strip is in the ferritic range of said steel.

12. (currently amended): The process as claimed in one of claims 1, ~~characterized in that~~ wherein the strip is coiled at a temperature below 750°C between the forced cooling operation and the cold rolling operation.

13. (currently amended): The process as claimed in one of claims 1, ~~characterized in that~~ wherein the reduction ratio of the cold rolling is at least 85%.

14. (currently amended): The process as claimed in one of claims 1, ~~characterized in that~~ wherein said cold rolling is carried out in a single step.

15 (canceled).

16 (canceled).

17 (new): The process as claimed in claim 5, wherein said cast comprises casting between two internally cooled horizontal rolls rotating in opposite directions.

18 (new): The process as claimed in claim 5, wherein said step is carried out with a reduction ratio of at least 20%.

19 (new): The process as claimed in claim 5, wherein said step is carried out with a reduction ratio of at least 50%.

20 (new): The process as claimed in claim 1, wherein the composition of said steel in percentages by weight is:

$$0 \leq C \leq 0.15\%;$$

$$0 \leq \text{Mn} \leq 0.6\%;$$

$$0 \leq P \leq 0.025\%;$$

$$0 \leq S \leq 0.05\%;$$

$$0 \leq \text{Al} \leq 0.12\%;$$

$$0 \leq N \leq 0.04\%;$$

the balance being iron, smelting impurities and alloying elements in amounts that do not prevent the use of said strip to manufacture packaging steel.

21 (new): The process as claimed in claim 5, wherein the composition of the steel in percentages by weight is:

$$0 \leq C \leq 0.15\%;$$

$$0 \leq \text{Mn} \leq 0.6\%;$$

$$0 \leq P \leq 0.025\%;$$

$$0 \leq S \leq 0.05\%;$$

$$0 \leq \text{Al} \leq 0.12\%;$$

$$0 \leq N \leq 0.04\%;$$

the balance being iron, smelting impurities and alloying elements in amount that do which do not prevent the use of said strip to manufacture packaging steel.

22 (new): The process according to claim 1, wherein the strip is coiled and then uncoiled before a cold rolling operation.

23 (new): The process according to claim 5, wherein the strip is coiled and then uncoiled before a cold rolling operation.

24 (new): The process according to claim 1, wherein the strip after hot rolling has a thickness of 0.9 mm.

25 (new): The process according to claim 1, wherein said strip undergoes forced cooling at a rate of 100 to 300 °C/sec.

26 (new): The process according to claim 5, wherein said strip undergoes forced cooling at a rate of 100 to 300 °C/sec.

27 (new): The process according to claim 1, wherein said thin strip is cast from 1 to 4 mm in thickness.

28 (new): The process according to claim 5, wherein said thin strip is cast from 1 to 4 mm in thickness.

29 (new): The process according to claim 20, wherein the alloying elements are not present.

30 (new): The process according to claim 21, wherein the alloying elements are not present.

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31 (new): The process according to claim 20, wherein the alloying elements do not contain Sn, Ca, or Ar.

32 (new): The process according to claim 21, wherein the alloying elements do not contain Sn, Ca, or Ar.